

WHAT IS CLAIMED IS:

- 1 1. A method comprising:
2 transmitting a first data stream to a switch fabric, said first data stream having
3 a first priority; and
4 at any time during said transmission, interrupting said transmission of said
5 first data stream to transmit a second data stream to said switch fabric,
6 said second data stream having a second priority.
- 1 2. The method of claim 1, further comprising:
2 resuming transmission of said first data stream if there is no data of said
3 second data stream to transmit.
- 1 3. The method of claim 1, further comprising:
2 stopping said transmission of said first data stream;
3 transmitting a switch code; and
4 transmitting said second data stream.
- 1 4. The method of claim 3, further comprising:
2 transmitting a switch code; and
3 resuming transmission of said first data stream.
- 1 5. The method of claim 1, wherein
2 said first priority is a low priority; and
3 said second priority is a high priority.
- 1 6. The method of claim 1, further comprising :
2 stopping transmission of a frame of said first data stream after detection of a
3 start of frame and prior to detection of an end of frame.
- 1 7. The method of claim 6, further comprising:
2 transmitting data of said second data stream; and
3 resuming transmission of data of said first data stream.
- 1 8. The method of claim 6, further comprising:
2 transmitting a second priority switch code;

3 transmitting data of said second data stream;
4 transmitting a first priority switch code; and
5 transmitting data of said first data stream.

1 9. The method of claim 1, further comprising:
2 storing data of said first data stream in a first FIFO; and
3 storing data of said second data stream in a second FIFO.

1 10. The method of claim 9, wherein said interrupting comprises:
2 upon detection of data in said second FIFO, interrupting said first data stream.

1 11. The method of claim 9, further comprising:
2 receiving a data stream at a line card, said data stream comprising frames of
3 said first data stream and frames of said second data stream; and
4 detecting the priority of said frames of said data stream.

1 12. The method of claim 1, further comprising:
2 at periodic intervals during transmission of said second data stream,
3 transmitting an amount of bytes of data of said first data stream.

1 13. An apparatus comprising:
2 a first buffer configured to store data of a first data stream, said data of said
3 first data stream having a first priority;
4 a second buffer configured to store data of a second data stream, said data of
5 said second data stream having a second priority;
6 a priority switch circuit coupled to said first buffer and said second buffer,
7 wherein said priority switch circuit is configured to
8 upon detection of data of said second data stream, interrupt a
9 transmission of data of said first data stream at any time during
10 said transmission and transmit data of said second data stream.

1 14. The apparatus of claim 13, wherein said priority switch circuit is
2 further configured to resume transmission of said first data stream if there is no data
3 of said second data stream to transmit.

1 15. The apparatus of claim 14, wherein said priority switch circuit is
2 further configured to transmit a first switch code after the second buffer has
3 transmitted data of said second data stream and prior to transmission of data of said
4 first data stream.

1 16. The apparatus of claim 13, wherein said priority switch circuit is
2 configured to transmit a second switch code upon detection of data of said second
3 data stream.

1 17. The apparatus of claim 13 wherein said priority switch circuit is further
2 configured to interrupt transmission of said first data stream during transmission of a
3 packet of said first data stream from said first buffer.

1 18. The apparatus of claim 13 wherein said priority switch circuit is further
2 configured to transmit an amount of bytes from said first data stream at periodic
3 intervals during transmission of said second data stream from said second buffer.

1 19. The apparatus of claim 13 further comprising:
2 a port coupleable to a network device; and
3 a forwarding engine coupled between said port and each of said first and
4 second buffers, said forwarding engine configured to forward frames
5 of said first data stream to said first buffer and forward second frames
6 of said second data stream to said second buffer.

1 20. The apparatus of claim 13 further comprising:
2 a serial link configured to serialize data received from said first and said
3 second buffers and said priority switch circuit and transmit said
4 serialized data to a switching fabric.

1 21. The apparatus of claim 20 further comprising:
2 a plurality of buffers, each buffer configured to store data of a data stream,
3 each data stream having a priority level, wherein said priority switch
4 circuit is further configured to

5 interrupt a transmission of one of said data streams from one of said
 6 buffers upon detection of data having a highest priority level,
 7 and
 8 transmit data having said highest priority level.

1 22. The apparatus of claim 13 further comprising:
 2 a switch fabric coupled to said first and second buffers.

1 23. An apparatus comprising:
 2 a first buffer configured to store data of a first data stream, said data of said
 3 first data stream having a first priority;
 4 a second buffer configured to store data of a second data stream, said data of
 5 said second data stream having a second priority; and
 6 means for, upon detection of data in said second buffer, interrupting a
 7 transmission of said first data stream at any time and transmitting said
 8 second data stream to a switch fabric.

1 24. The apparatus of claim 23, further comprising:
 2 means for resuming transmission of said first data stream if there is no data of
 3 said second data stream to transmit.

1 25. The apparatus of claim 23, wherein said means for interrupting
 2 comprises :
 3 means for stopping said transmission of said first data stream; and
 4 means for transmitting a switch code.

1 26. The apparatus of claim 23, wherein said means for interrupting
 2 comprises:
 3 means for stopping transmission of a packet of said first data stream after
 4 detection of a start of frame and prior to detection of an end of frame.

1 27. The apparatus of claim 26, wherein said means for interrupting
 2 comprises:
 3 means for transmitting a second priority switch code; and
 4 means for transmitting a first priority switch code.

- 1 28. The apparatus of claim 23, further comprising:
- 2 at periodic intervals during transmission of said second data stream,
- 3 means for transmitting an amount of bytes of data of said first
- 4 data stream.